CLAIMS

1. A method for reducing power consumption in an implantable stimulation device, the implantable stimulation device delivering a repeating pattern of pulses to one or more tissues *in vivo*, the method comprising:

dropping one or more pulses in the repeating pattern of pulses; and

counting with a drop counter each of the one or more pulses dropped to determine completion of a dropped set within the repeating pattern of pulses when a number of dropped pulsed equals a drop parameter.

2. The method of Claim 1, the method further comprising:

counting with a stimulation counter each stimulation pulse in the repeating pattern of pulses to determine completion of stimulation set of pulses within the repeating pattern of pulses when a number of stimulation pulses equals a stimulation parameter.

3. The method of Claim 2, the method further comprising:

resetting the drop counter and the stimulation counter once the repeating pattern of pulses is complete.

4. The method of claim 1 wherein the method is implemented in software.

5. The method of claim 1 wherein the method is implemented in hardware.

6. The method of claim 1 wherein the repeating pattern of pulses comprises pulses repeating with a frequency between 2 and 5000 Hertz.

7. A method for reducing power consumption in an implantable stimulation device, the implantable stimulation device delivering a repeating pattern of pulses to one or more tissues *in vivo*, the method comprising:

counting with a first pulse counter each stimulation pulse in the repeating pattern of pulses to determine completion of stimulation set of pulses within the repeating pattern of pulses when a number of stimulation pulses equals a stimulation parameter;

dropping one or more pulses within the repeating pattern of pulses to form a dropped set of pulses;

counting with a second pulse counter each of the one or more pulses dropped to determine completion of the dropped set of pulses when a number of dropped pulses equals a drop parameter; and

resetting the first pulse counter and the second pulse counter upon completion of the repeating pattern of pulses.

8. The method of claim 7 wherein the method is implemented in software.

9. The method of claim 7 wherein the method is implemented in hardware.

10. The method of claim 7 wherein the repeating pattern of pulses comprises pulses repeating with a frequency between 2 and 5000 Hertz.

11. A system for reducing power consumption in an implantable neurostimulators, the implantable neurostimulators delivering a repeating pattern of pulses to one or more tissues, the system comprising:

means for dropping one or more pulses associated with a drop parameter in the repeating pattern of pulses to form a dropped set of pulses within the repeating pattern of pulses.

12. The system of claim 11, the system further comprising:

means for counting each stimulation pulse in the repeating pattern of pulses to determine completion of a stimulation set when a number of stimulation pulses equals a stimulation parameter.

13. The system of claim 11 wherein the repeating pattern of pulses comprises pulses repeating with a frequency between 2 and 5000 Hertz.

14. An implantable neurostimulators, the implantable neurostimulators delivering a repeating pattern of pulses to one or more tissues, the neurostimulators device comprising:

a first means for counting each stimulation pulse in the repeating pattern of pulses to determine completion of a stimulation set upon counting a first number of pulses associated with a stimulation parameter;

circuitry configurable to drop one or more pulses within the repeating pattern of pulses to form a dropped set of pulses; and

a second means for counting each of the one or more pulses in the dropped set to determining completion of the dropped set upon counting a second number of pulses associated with a drop parameter, resetting the first means and second means upon completion of the repeating pattern of pulses.

15. The neurostimulators device of claim 14 wherein the drop parameter and stimulation parameter are associated with at least one stimulation setting.

16. The neurostimulators device of claim 14 wherein the repeating pattern of pulses comprises pulses repeating with a frequency between 2 and 5000 Hertz.

17. The neurostimulators device of claim 14, the neurostimulators device further comprising:

means for establishing at least one drop parameter and at least one stimulation parameter.

18. A neurostimulator with a power conservation functionality, the neurostimulator comprising:

a microprocessor;

a switching circuitry communicatively coupled to the microprocessor and one or more leads, the one or more leads terminating in electrodes corporally located in proximity to one or more tissues;

a pulse generator communicatively coupled to the microprocessor and the switching circuitry, the pulse generator generating a repeating pattern of pulses; and

the switching circuitry selectively configurable to deliver a first number of stimulation pulses associated with at least one stimulation parameter, the switching circuitry selectively configurable to drop a second number of pulses associated with at least one drop parameter.

19. The neurostimulators of Claim 18, the neurostimulators further comprising:

at least one software-implemented counter, the at least one software-implemented counter counting dropped pulses, the microprocessor directing the configuration of the switching circuitry to drop pulses until a number of dropped pulses equals the second number of pulses.

20. The neurostimulators of Claim 18, the neurostimulators further comprising:

at least one hardware-implemented counter, the at least one hardware-implemented counter counting the dropped pulses, the hardware-implemented counter directing a configuration of the switching circuitry to drop a pulse until a number of dropped pulses equals the second number of pulses.

21. An electrical pulse stimulation system comprising:

a stimulation device, wherein the stimulation device further comprises:

a microprocessor;

a switching circuit communicatively coupled to the microprocessor;

a pulse generator that generates a repeating pattern of pulses, wherein the pulse generator is communicatively coupled to the microprocessor and the switching circuit, and wherein the switching circuit delivers a first number of stimulation pulses associated with at least one stimulation parameter, and can drop a second number of pulses associated with at least one drop parameter to reduce power consumption of the stimulation device;

a lead couple electrically coupled to an output of the switching circuit of the stimulation device; and

at least one electrode within the lead, wherein the at least one electrode delivers an electrical pulse generated by the stimulation device to living tissue proximate to the at least one electrode.

22. The electrical pulse stimulation system of Claim 21, wherein the stimulation device is implantable within a living organism.

23. The electrical pulse stimulation system of Claim 21, wherein the stimulation device is external to a living organism.

24. The electrical pulse stimulation system of Claim 21, wherein the stimulation device is a neurostimulator.

25. The electrical pulse stimulation system of Claim 21, wherein the stimulation device further comprises:

at least one software-implemented counter, the at least one software-implemented counter counting dropped pulses, the microprocessor directing the configuration of the switching circuitry to drop pulses until a number of dropped pulses equals the second number of pulses.

26. The electrical pulse stimulation system of Claim 21, wherein the stimulation device further comprises:

at least one hardware-implemented counter, the at least one hardware-implemented counter counting the dropped pulses, the hardware-implemented counter directing a configuration of the switching circuitry to drop a pulse until a number of dropped pulses equals the second number of pulses.